

S/N 10/722,235

Attorney Docket 172498-20

IN THE DRAWING:

Please replace the drawings filed on October 12, 2004 with the enclosed replacement drawings.

REMARKS:

Claims 1-3 and 7-29 are active. In response to the Office Action mailed March 31, 2005, claims 1-3 are amended, claims 4-6 are canceled without prejudice, and new claims 7-29 are added. In addition, Applicant amends the first paragraph of the specification to correct the priority claim of the present application. Applicant also amends the specification to correct obvious typographical errors. Finally, Applicant submits herewith replacement drawings to replace the drawings that were filed on October 12, 2004. In response to the Notice to File Corrected Application Papers mailed on August 6, 2004, Applicant erroneously provided drawings from another application, rather than from the present application.

In the Office Action, the drawings are objected to under 37 C.F.R. § 1.84(p). In addition, claims 1-3 are rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 3,589,069 ("the Lecomte reference"), and claims 4-6 are rejected under 35 U.S.C. § 103(a) as unpatentable over the Lecomte reference.

First, Applicant appreciates the Examiner's comments regarding the references cited in the Background of the present specification. Applicant has prepared a Supplemental Information Disclosure Statement, filed concurrently with the present Amendment, disclosing various references, including several of those identified in the Background.

With respect to the objections to the drawings, replacement FIGS. 1-15 are submitted herewith, which include reference numbers missing from one or more of the drawings. FIGS. 1-3 have been corrected to include missing reference numbers 2, 4, 6, 10, 12, 14, and 15. FIGS. 4-6 have been corrected to include missing reference

numbers 6,' 11, 38, 40, 42, and reference number 39 has been added to indicate the groove described in paragraph 72 of the specification. Reference number 15 in FIG. 6 has been amended to 15.' FIGS. 7-9 have been corrected to include missing reference numbers 11, 16, 17, 18, 19, and 20.' FIGS. 10 and 11 have been corrected to include missing reference numbers 11, 16, 26, and 28. FIG. 14 has been corrected to include missing reference numbers 112, 116,' 118, 120, 122 and 122,' and FIG. 15 has been corrected to include missing reference number 110. No new matter has been introduced, as each of these corrections is supported by the specification and original drawings. Approval of the enclosed drawings is respectfully requested.

To correspond to the drawings, paragraphs 58, 71, and 72 of the specification have been amended to include or correct various reference numbers identified above with respect to the drawings. In addition, paragraphs 58 and 72 have also been amended to correct obvious typographical and grammatical errors. No new matter has been introduced. Based upon these amendments, the objections to the drawings should be withdrawn.

With respect to the § 102(b) rejections, the Lecomte reference discloses a complicated vehicle door mounting that includes a shaft 4 rigidly secured by a baseplate 5 to a lateral body member 7 of a vehicle, a socket 13 rotatably mounted on the shaft 4, and a ring member 16 fitted on the socket 13 and to a door panel 1. (Col. 2, lines 17-37). A spiral spring 38 is provided for compensating for the weight of the door. (Col. 2, lines 67-68). In addition, the mounting includes a complicated linkage including trunnions 18, link 19, control lever 31, and handle 34, which allow the door to be opened from the interior. (Col. 2, lines 40-60).

The Lecomte mounting provides a pivot axis 2 that allows the door to be moved in translation along this axis for releasing the door from its frame (col. 2, lines 10-14), and then rotated about the pivot axis. Specifically, as shown in FIG. 2, step II, the user can use the linkage to cause the ring 16 to slide axially along the socket 13 and thus push or translate the door panel 1 out from its frame structure. (Col. 3, lines 37-41). Upon completing this motion, the door is pivoted about the shaft 4 to the raised or fully open position shown in FIG. 2, step III.

Turning to the present claims, claim 1 recites a method of opening a vehicle door in a doorway of a vehicle body that includes rotating the vehicle door in a horizontal plane of motion until the vehicle door substantially clears the vehicle body, and then rotating the vehicle door in a vertical plane of motion until the vehicle door substantially clears the doorway. ***The Lecomte reference fails to teach or suggest rotating a vehicle door in a horizontal plane of motion*** and then rotating the vehicle door in a vertical plane of motion. ***Instead, the Lecomte reference discloses translating a vehicle door along a horizontal pivot axis*** to release the door from the frame and then rotating the door to a raised position. For this reason, claim 1 and its dependent claims are neither anticipated by nor otherwise obvious in light of the Lecomte reference.

Turning to claim 12, a method is recited for retrofitting a vehicle door hinge connecting a vehicle door to a vehicle frame that includes removing the vehicle door hinge; fastening a chassis mounting plate to the vehicle frame; and fastening a swingarm to the vehicle door, the swingarm being connected to the chassis mounting

plate by a bi-directional rotation mechanism that allows the vehicle door to rotate in a horizontal plane and in a vertical plane relative to the vehicle frame.

The Lecomte reference fails to disclose, teach, or suggest anything about retrofitting a vehicle door hinge, as claimed. In particular, the Lecomte reference fails to provide any motivation, teaching, or suggestion of removing a vehicle door hinge, e.g., a conventional horizontal swinging door, and fastening a chassis mounting plate and swingarm to a vehicle frame and door, respectively, that allow the door to ***rotate in a horizontal plane and in a vertical plane***. Accordingly, claim 12 and its dependent claims are neither anticipated by nor otherwise obvious in light of the Lecomte reference.

Each of claims 11, 18, and 23 recites a bi-directional rotation mechanism that includes a bi-hinge connected to the chassis mounting plate by bi-hinge supports, thereby allowing the vehicle door to rotate in the horizontal plane, and a bi-hinge rod connected to the swingarm and the bi-hinge, thereby allowing the vehicle door to rotate in the vertical plane. The Lecomte reference does not teach or suggest such a bi-directional rotation mechanism. As explained above, at most, the Lecomte reference discloses a mounting that allows a vehicle door to translate along a horizontal axis and then rotate about that horizontal axis. For these reasons, claims 11, 18, and 23 are also neither anticipated by nor obvious over the Lecomte reference.

Further, claim 17 recites a sag adjustment device that includes a sag adjuster screw on one of the chassis mounting plate and the swingarm and a sag adjuster guide on the other of the chassis mounting plate and the swingarm, and recites adjusting the

sag adjuster screw. The Lecomte reference also fails to disclose, teach, or suggest

these features, and therefore does not anticipate claim 17 or render claim 17 obvious.

Turning to claim 19, a method is recited for installing a hinge between a vehicle frame and a vehicle door, the hinge comprising a chassis mounting plate, a swingarm, a bi-directional rotation mechanism connecting the swingarm to the chassis mounting plate, and a swingarm angle adjuster. Claim 19 also recites fastening the chassis mounting plate to the vehicle frame; fastening the swingarm to the vehicle door, the bi-directional rotation mechanism allowing rotation of the vehicle door in a horizontal plane and a vertical plane relative to the vehicle frame; and adjusting the swingarm angle adjuster to adjust an angle of the vehicle door relative to the vehicle frame that is maintained during rotation of the vehicle door in the horizontal plane.

First, as explained above, the Lecomte reference fails to disclose, teach, or suggest a bi-directional rotation mechanism that allows **rotation** of a vehicle door in a horizontal plane and a vertical plane relative to the vehicle frame. In addition, the Lecomte reference does not teach or suggest adjusting a hinge including a chassis mounting plate, a swingarm, a bi-directional rotation mechanism connecting the swingarm to the chassis mounting plate, and a swingarm angle adjuster, as claimed, nor adjusting the swingarm angle adjuster to adjust an angle of the vehicle door relative to the vehicle frame that is maintained during rotation of the vehicle door in the horizontal plane. For these reasons, neither claim 19 nor its dependent claims are anticipated by or obvious over the Lecomte reference.

Turning to claim 25, a method is recited for installing a hinge between a vehicle frame and a vehicle door, the hinge comprising a chassis mounting plate, a swingarm,

and a bi-directional rotation mechanism connecting the swingarm to the chassis

mounting plate, the method comprising: fastening the chassis mounting plate to the vehicle frame; fastening the swingarm to the vehicle door, the bi-directional rotation mechanism allowing motion of the vehicle door in a horizontal plane and in a vertical plane relative to the vehicle frame; and fastening opposite ends of a spring to the chassis mounting plate and the swingarm, respectively, to counter balance the weight of the door.

First, the Lecomte reference does not disclose, teach, or suggest a hinge including a chassis mounting plate, a swingarm, and a bi-directional rotation mechanism connecting the swingarm to the chassis mounting plate, as claimed. Further, the Lecomte reference also fails to teach or suggest fastening opposite ends of a spring to the chassis mounting plate and the swingarm, respectively, to counter balance the weight of the door. Instead, at most, the Lecomte reference discloses a complicated mounting that includes a coiled spring that is connected differently. Accordingly, claim 25 and its dependent claims are also neither anticipated nor otherwise obvious in light of the Lecomte reference.

Finally, as explained above, the Lecomte reference does not disclose, teach, or suggest removing a previous hinge from between the vehicle frame and the vehicle door, as recited in claims 20 and 26. Therefore, these claims further distinguish the Lecomte reference and are neither anticipated nor obvious over the Lecomte reference.

Claims 2-11 depend from claim 1, claims 13-18 depend from claim 12, claims 20-24 depend from claim 19, and claims 26-29 depend from claim 25. These claims include all of the steps of the independent claims from which they depend and further

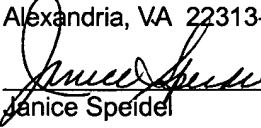
limitations also absent from the Lecomte reference. These claims are believed

allowable for the same reasons as the independent claims from which they depend and for the additional steps not shown or made obvious by the Lecomte reference.

In view of the foregoing, it is submitted that all of the claims now presented in this application define patentable subject matter over the cited prior art and are in proper form for allowance. Accordingly, reconsideration and allowance of the application is requested.

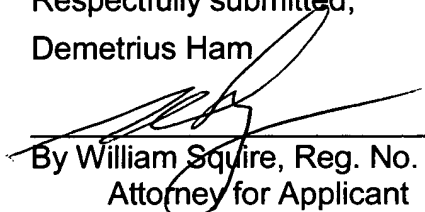
Enclosed is a separate letter showing the fee calculation for the added claims showing that \$300 is due for the added claims. In addition, enclosed is a request for a three month extension of time having a \$510 fee. Enclosed is a check in the amount of \$810 for the claim fee and the extension of time fee.

The Commissioner is authorized to charge or credit deposit account 03 0678 for any under or over payments in connection with this paper.

EXPRESS MAIL CERTIFICATE	
Express Mail Label No. EV 439771465 US Deposit Date: September 29, 2005	
I hereby certify that this paper and the attachments hereto are being deposited today with the U.S. Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above addressed to:	
MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	
 Janice Speidel	September 29, 2005 Date

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Respectfully submitted,
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